

passage, the metal-lifting passage having an outlet opening in the molten metal for discharging molten metal received in the inlet opening means, the metal-lifting passage having gas-injection openings upstream of the molten metal outlet opening; gas passage means for connecting a source of gas to the gas-injection openings in the form of a gas jet into the metal-lifting passage such that the gas induces a flow of molten metal from the molten metal inlet opening means toward the molten metal outlet opening along an axis of motion, the improvement comprising:

the molten metal inlet opening means comprising a window in the metal-lifting passage disposed coaxially and/or laterally with respect to the path of motion of the gas flowing through the metal-lifting passage; [and]

the gas-injection openings are disposed to introduce a gas jet into the metal-lifting passage along said axis of motion; and

the gas injection openings discharge the gas into the metal lifting passage in the direction of metal flow as the gas mixes with the metal.

¹⁰13. In a metal treating apparatus having a pot for holding a bath of molten metal, transfer means for moving the molten metal in the pot, including a molten metal-moving passage having inlet opening means disposed in the molten metal for receiving molten metal into the metal-moving passage, the metal-moving passage having an outlet opening for discharging molten metal received in the inlet opening means, the metal-moving passage having a gas-injection [openings] opening upstream of the molten metal outlet opening; gas passage means for [connecting] introducing a source of gas [to] from the gas-

B2 injection [openings] opening in the form of a gas jet into the metal-moving passage in the direction the metal is moving past said gas injection opening toward the molten metal outlet opening such that the momentum of the gas induces a flow of the molten metal from the molten metal inlet opening means toward the molten metal outlet opening.

B3 18 21. (Twice amended) A pump for moving a liquid comprising:

a body having a liquid inlet port for receiving liquid from a liquid source, and a liquid outlet port, and an internal liquid passage fluidly connecting the liquid inlet port and the liquid outlet port for passing liquid therethrough;

the internal passage having a tapered passage including one end thereof defining said inlet port of a first diameter, and an opposite end defining an outlet port of a second greater diameter downstream of the inlet port; [and]

a source of a gas, and gas jet means disposed in the tapered passage to induce a flow of the liquid from the inlet port toward the outlet port; and

the gas jet means discharge the gas into the internal liquid passage in the direction of liquid flow as the gas mixes with the liquid.

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27. (Amended) Apparatus for introducing a gas into a moving liquid comprising:

a body having a liquid inlet port for receiving liquid from a liquid source, and a liquid outlet port, and an internal liquid passage fluidly connecting the liquid inlet port and the liquid outlet port for passage liquid therethrough;

the internal passage having a tapered passage including one end thereof defining said inlet port of a first diameter, and an opposite end defining an outlet port of a second lesser diameter downstream of the inlet port;
[and]

a source of gas, and gas jet means disposed in the internal passage adjacent the inlet port to induce flow of the liquid from the inlet port toward the outlet port; and

the gas jet means discharge the gas into the internal passage in the direction of liquid flow as the gas mixes with the liquid.

25 28. (Amended) Apparatus for introducing a gas into a moving liquid stream comprising:

a body means having a tapered internal passage, and an inlet and an outlet for passing a liquid through the tapered internal passage;

a gas distribution means disposed in the body adjacent the tapered passage, the gas distribution means having conduit means connected to a source of a gas, and nozzle means disposed in the body for delivering the gas into the liquid to induce a flow of the liquid through said internal tapered passage;
and